N-2	-24
N+2	-28
N-3	-30
N+3	-34
N-4	-34
N+4	-25
N-7	-35
N+7	-34
N-8	-32
N+8	-43
N+14	-33
N+15	-31

Note: Due to the frequency spacing that exists between Channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, the minimum adjacent channel technical criteria specified above shall not be applicable to these pairs of channels (see section 73.603(a) of this part).

(d) *Minimum geographic spacing requirements for DTV allotments not included in the initial DTV Table of Allotments.* No petition to add a new channel to the DTV Table of Allotments will be accepted unless it demonstrates compliance with the principle community coverage requirements of section 73.625(a) of this part and meets the following requirements for geographic spacing with regard to all other DTV stations, DTV allotments and analog TV stations:

(1)

Channel Relationship	Separation Requirement	
VHF Channels 2-13		
Co-channel, DTV to DTV		
	Zone I	244.6 km
	Zones II & III	273.6 km
Co-channel, DTV to analog TV		
	Zone I	244.6 km
	Zone II & III	273.6 km
Adjacent Channel		
DTV to DTV	No allotments permitted between:	
	Zone I	40.2 km and 96.6 km
	Zones II & III	48.3 km and 96.6 km
DTV to analog TV	No allotments permitted between:	

	Zone I	11.3 km and 114.3 km
	Zone II & III	17.7 km and 146.4 km
UHF Channels		
Co-channel, DTV to DTV		
	Zone I	196.3 km
	Zone II & III	223.7 km
Co-channel, DTV to analog TV		
	Zone I	217.3 km
	Zone II & III	244.6 km
Adjacent Channel		
DTV to DTV	No allotments permitted between:	
	All Zones	32.2 km and 88.5 km
DTV to analog TV	No allotments permitted between:	
	All Zones	9.7 km and 88.5 km
Taboo Channels, DTV to analog TV only (DTV channels +/- 2, +/- 3, +/- 4, +/- 7, +/- 8, and 14 or 15 channels above the analog TV channel)	No allotments permitted between:	
	Zone I	24.1 km and 80.5 km
	Zone II & III	24.1 km and 96.6 km

Note: Due to the frequency spacing that exists between Channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, the minimum geographic spacing requirements specified above shall not be applicable to these pairs of channels (see section 73.603(a) of this part).

(2) Zones are defined in section 73.609 of this part. The minimum distance separation between a DTV station in one zone and an analog TV or DTV station in another zone shall be that of the zone requiring the lower separation.

(e) *Protection of land mobile operations on channels 14-20.* The Commission will not accept petitions to amend the DTV Table of Allotments, applications for new DTV stations, or applications to change the channel or location of authorized DTV stations that would use channels 14-20 where the distance between the DTV reference point as defined in section 73.622(d) of this part, would be located less than 250 km from the city center of a co-channel land mobile operation or 176 km from the city center of an adjacent channel land mobile operation. Land mobile operations on these channels in the following markets:

City	Channels	Latitude	Longitude

Boston, MA	14, 16	42°	21'	24"	71°	03'	25"
Chicago, IL	14, 15	41°	52'	28"	87°	38'	22"
Dallas, TX	16	32°	47'	09"	96°	47'	37"
Houston, TX	17	29°	45'	26"	95°	21'	37"
Los Angeles, CA	14, 20	34°	03'	15"	118°	14'	28"
Miami, FL	14	25°	46'	37"	80°	11'	32"
New York, NY	14, 15	40°	45'	06"	73°	59'	39"
Philadelphia, PA	19, 20	39°	56'	58"	75°	09'	21"
Pittsburgh, PA	14, 18	40°	26'	19"	80°	00'	00"
San Francisco, CA	16, 17	37°	46'	39"	122°	24'	40"
Washington, D.C.	17, 18	38°	53'	51"	77°	00'	33"

(f) *Negotiated agreements on interference.* Notwithstanding the minimum technical criteria for DTV allotments specified above, DTV stations operating on allotments that are included in the initial DTV Table may operate with increased ERP and/or antenna HAAT that would result in additional interference to an analog TV station if that station agrees, in writing, to accept the additional interference. Such agreements must be submitted with the application for authority to construct or modify the DTV station's facilities. The larger service area resulting from such a change of ERP and/or antenna HAAT will be protected in accordance with the provisions of paragraph (c) of this section. Applications submitted pursuant to the provisions of this paragraph will be granted only if the Commission finds that such action is consistent with the public interest.

PART 74 – EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTION SERVICES

6. The authority citation for Part 74 continues to read as follows:

AUTHORITY: Secs. 4, 303, 48 Stat. 1066, as amended, 1082, as amended; 47 U.S.C. 154, 303, 336, and 554.

7. Section 74.701 is amended by revising paragraph (b) to read as follows:

§ 74.701 Definitions.

* * * * *

(b) *Primary station.* The analog television broadcast station (TV broadcast) or digital television station (DTV) which provides the programs and signals being retransmitted by a television broadcast translator station.

* * * * *

8. Section 74.702 is amended by revising paragraph (b) to read as follows:

§ 74.702 Channel assignments.

* * * * *

(b) Changes in the TV Table of Allotments or Digital Television Table of Allotments (§73.606(b) and § 73.622(a), respectively, of Part 73 of this chapter), authorizations to construct new TV broadcast analog or DTV stations or to authorizations to change facilities of existing such stations, may be made without regard to existing or proposed low power TV or TV translator stations. Where such a change results in a low power TV or TV translator station causing actual interference to reception of the TV broadcast analog or DTV station, the licensee or permittee of the low power TV or TV translator station shall eliminate the interference or file an application for a change in channel assignment pursuant to § 73.3572 of this chapter.

9. Section 74.703 is amended by revising paragraphs (a) and (b) and correcting paragraph (c) to read as follows:

§ 74.703 Interference.

(a) An application for a new low power TV, TV translator, or TV booster station or for a change in the facilities of such an authorized station will not be granted when it is apparent that interference will be caused. Except where there is a written agreement between the affected parties to accept interference, or where it can be shown that interference will not occur due to terrain shielding and/or Longley-Rice terrain dependent propagation methods, the licensee of a new low power TV, TV translator, or TV booster shall protect existing low power TV and TV translator stations from interference within the protected contour defined in Sec. 74.707. Such written agreement shall accompany the application. Guidance on using the Longley-Rice methodology is provided in OET Bulletin No. 69.

(b) It shall be the responsibility of the licensee of a low power TV, TV translator, or TV booster station to correct at its expense any condition of interference to the direct reception of the signal of any other TV broadcast analog station and DTV station operating on the same channel as that used by the low power TV, TV translator, or TV booster station or an adjacent channel which occurs as a result of the operation of the low power TV, TV translator, or TV booster station. Interference will be considered to occur whenever reception of a regularly used signal is impaired by the signals radiated by the low power TV, TV translator, or TV booster station, regardless of the quality of the reception or the strength of the signal so used. If the interference cannot be promptly eliminated by the application of suitable techniques, operation of the offending low power TV, TV translator, or TV booster station shall be suspended and shall not be resumed until the interference has been eliminated. If the complainant refuses to permit the low Power TV, TV translator, or TV booster station to apply remedial techniques that demonstrably will eliminate the interference without impairment of the original reception, the licensee of the low power TV, TV translator, or TV

booster station is absolved of further responsibility. TV booster stations will be exempt from the provisions of this paragraph to the extent that they may cause limited interference to their primary stations' signal subject to the conditions of paragraph (g) of this section.

(c) It shall be the responsibility of the licensee of a low power TV, TV translator, or TV booster station to correct any condition of interference which results from the radiation of radio frequency energy outside its assigned channel. Upon notice by the FCC to the station licensee or operator that such interference is caused by spurious emissions of the station, operation of the station shall be immediately suspended and not resumed until the interference has been eliminated. However, short test transmissions may be made during the period of suspended operation to check the efficacy of remedial measures.

10. Section 74.705 is amended by revising the heading and paragraphs (b)(4) and b(5), and adding a new paragraph (e) as follows:

§ Sec. 74.705 TV broadcast analog station protection.

* * * * *

(b) * * *

(4) A UHF low power TV or TV translator construction permit application will not be accepted if it specifies a site less than 100 kilometers from the transmitter site of a UHF TV broadcast analog station operating on a channel which is the seventh channel above the requested channel, unless it can demonstrate that the service area of the low power TV or TV translator station as established in § 74.707(a) is not located in an area where the TV broadcast analog station is regularly viewed..

(5) An application for a new UHF low power TV or TV translator construction permit, a change of channel, or a major change in facilities pursuant to § 73.3572 of this chapter proposing a maximum effective radiated power of more than 50 kilowatts will not be accepted if it specifies a site less than 32 kilometers from the transmitter site of a UHF TV broadcast analog station operating on a channel which is the second, third, or fourth channel above or below the requested channel.

* * * * *

(e) In support of a request for waiver of the interference protection rules, an applicant for a low power TV, TV translator or TV booster may make full use of terrain shielding and Longley-Rice terrain dependent propagation prediction methods to demonstrate that the proposed facility would not be likely to cause interference to TV broadcast stations. Guidance on using the Longley-Rice methodology is provided in OET Bulletin No. 69.

11. A new Section 74.706 is added to read as follows:

§ 74.706 Digital TV (DTV) station protection

(a) For purposes of this section, the DTV station protected service area is the geographic-area in which the field strength of the station's signal exceeds the noise-limited service levels specified in § 73.622(e). The extremity of this area (noise-limited perimeter) is calculated from the authorized maximum radiated power (without depression angle correction), the horizontal radiation pattern, and height above average terrain in the pertinent direction, using the signal propagation method specified in § 73.625(b).

(b)(1) An application to construct a new low power TV or TV translator station or change the facilities of an existing station will not be accepted if it specifies a site which is located within the noise-limited service perimeter a co-channel DTV station.

(2) Due to the frequency spacing which exists between TV channels 4 and 5, between Channels 6 and 7, and between Channels 13 and 14, adjacent channel protection standards shall not be applicable to these pairs of channels.

(c) The low power TV, TV translator or TV booster station field strength is calculated from the proposed effective radiated power (ERP) and the antenna height above average terrain (HAAT) in pertinent directions.

(i) For co-channel protection, the field strength is calculated using Figure 9a, 10a, or 10c of § 73.699 (F(50,10) charts of Part 73 of this chapter.

(ii) For adjacent channel protection, the field strength is calculated using Figure 9, 10, or 10b of § 73.699 (F(50,50) charts) of Part 73 of this chapter.

(d) A low power TV, TV translator or TV booster station application will not be accepted if the ratio in dB of its field strength to that of the DTV station fails to meet the following:

(1) - 21 dB for co-channel operations at the noise-limited perimeter of the DTV station..

(2) + 48 dB for adjacent channel operations at:

(i) the DTV noise-limited perimeter if a low power TV, TV translator or TV booster station is located outside that perimeter.

(ii) at all points within the DTV noise-limited area if a low power TV or TV translator is located within the DTV noise-limited perimeter, as demonstrated by the applicant.

12. Section 74.707 is amended by revising paragraph (b)(3), deleting paragraphs (d)(5) and (d)(6), redesignating paragraph (d)(7) as (d)(5), and adding a new paragraph (e) to read as follows:

§ 74.707 Low power TV and TV translator station protection.

* * * * *

(b) * * *

(3) A UHF low power TV, TV translator, or TV booster construction permit application will not be accepted if it specifies a site within the UHF low power TV, TV translator, or TV booster station's protected contour and proposes operation on a channel that is 15 channels above the channel in use by the low power TV, TV translator, or TV booster station.

* * * * *

(e) In support of a request for waiver of the interference protection rules, an applicant for a low power TV or TV translator station may make full use of terrain shielding and Longley-Rice terrain dependent propagation prediction methods to demonstrate that the proposed facility would not be likely to cause interference to low power TV, TV translator and TV booster stations.

13. Section 74.735 is amended by revising paragraphs (a), (b)and (c) and deleting paragraphs (d), (e) and (f).

§ 74.735 Power limitations.

(a) The maximum peak effective radiated power (ERP) of an analog low power TV, TV translator, or TV booster station shall not exceed: 1) 3 kW for VHF channels 2-13; and 2) 150 kW for UHF channels 14-69.

(b) The maximum ERP of a digital low power TV, TV translator, or TV booster station (average power) shall not exceed: 1) 300 watts for VHF channels 2-13 and 2) 15 kW for UHF channels 14-69.

(c) The limits above apply separately to the effective radiated powers that may be obtained by the use of horizontally or vertically polarized transmitting antennas, providing the applicable provisions of §§ 74.705, 74.706, 74.707 and 74.709 are met. For either omnidirectional or directional antennas, where the ERP values of the vertically and horizontally polarized components are not of equal strength, the ERP limits above shall apply to the polarization with the larger ERP. Applications proposing the use of directional antenna systems must be accompanied by the following:

* * * * *

14. Section 74.750 is amended by revising paragraph (a) to read as follows:

§ 74.750 Transmission system facilities.

* * * * *

(a) A low power TV, TV translator, or TV booster station shall operate with a transmitter that is either type accepted for licensing under the provisions of this subpart or type notified for use under Part 73 of this chapter.

* * * * *

SEPARATE STATEMENT OF
CHAIRMAN REED E. HUNDT

RE: Adoption of Digital Television Allotment and Service Rules Reports and Orders, April 3, 1997.

Today's decision marks the culmination of a long and worthy effort in Congress and at the Commission to ensure that 21st century America has a free, universally available digital medium that not only entertains but that educates and informs children and adults.

It also marks a radical departure from earlier Commission decisions that were presented to the members of this Commission with its current membership as of 1994.

In every material respect in which the Commission had discretion, the plan adopted today is a significant change from earlier policies. The new policies represent, first, a movement away from a command and control policy toward a market orientation for the business of digital television; and second, today's policies focus on the public interest benefits the public will receive from digital television.

In terms of a market orientation, the Commission has moved from having government determine the television format of the future to having industries compete to provide the best format; from having government dictate the quality of picture resolution to giving broadcasters the freedom to respond to market forces; from having government restrict the use of the digital channel through simulcasting and other policies to giving broadcasters the flexibility to use the spectrum to respond to market opportunities.

In terms of the public interest, the benefits of our policy changes can be measured in many ways. The original plan had the public recovering 72 MHz in 15 years. The new plan has the public recovering a full 138 MHz -- 60 MHz immediately and 78 MHz in ten years. The return of a lot more spectrum a lot faster is a benefit worth billions of dollars; but far more important, the early return will generate new services and economic growth for the economy. The early return can also be measured in lives saved, as 24 MHz can now, and should be, reallocated to the critical needs identified in the report of the Public Safety Advisory Committee.

Another public interest benefit is the accelerated provision of digital television services to the public. The prior plan was a slow motion launch requiring three years of licensing and six years to build. Instead, this Commission today adopts a plan for instant licensing and a rapid build-out. Further, our approach of focusing build-out in major markets by Christmas 1998 and Christmas 1999 scuttles the laissez-faire approach of the 1992 decision. Now we rely on the lead dogs to move the transition, which gives the country the biggest bang for the smallest buck. Specifically, we have the commitments of individual broadcasters and the NAB to build at least 3 stations in markets serving 1/7th of the countryby November 1998,

almost 1/3 of the country by April 1999, and 1/2 by November 1999.

Further, the earlier view of this proceeding was that digital television represents a burden to broadcasters. We are of the view that digital television represents a tremendous boon to broadcasters and that, therefore, now is the appropriate time to reexamine through a Notice appropriate public interest rules for the digital age. The Commission vote to move forward with this Notice is another breakthrough result.

This Commission can justly be proud of the many improvements in its policies for the digital television service. We even changed the name from the misleading "high definition" to the apt "digital." The evolution of DTV policy is discussed in greater detail below.

MOVING TO A MARKET ORIENTATION

The Standard

The Commission wisely adopted a digital TV standard that does not artificially limit broadcasters' choice of picture formats, allowing the directives of the marketplace, not government, to carry the day. Until June 1995, the Commission's Advisory Committee was considering a standard with a single goal -- high definition formats that used virtually all of the digital capacity of a 6 MHz channel. This would have been a serious and unfortunate constraint on broadcasters' ability to offer a package of digital programming and services that would help create a new digital medium and enhance consumer willingness to purchase digital receivers. After a number of discussions, the Advisory Committee -- to its credit -- decided to include other digital formats that used less bandwidth. The recommendation of the Advisory Committee aided by the addition of Microsoft, ultimately included both high definition and standard definition digital formats.

Unfortunately, as Microsoft explained at the time, some of the recommended formats were not well suited for use with computers. The Commission increased the likelihood of TV-PC convergence by modifying the recommended standard to remove the specification of formats altogether. The recommendation to do so was made jointly by the computer, broadcast and consumer electronics industries, after negotiations we encouraged. As a result of the revised standard, computer manufacturers have already announced plans to build massive numbers of DTV-compatible computers so that by the time television manufacturers will have made one million DTV television sets, computer manufacturers will have sold 20 to 50 million DTV-compatible computers. And Silicon Valley companies including Microsoft, Intel and Compaq are developing dazzling new PC-TV products.

We have, in short, moved from a marketplace where the only new product would be a prettier picture to a marketplace in which businesses can compete in offering a plethora of new products riding on a river of bits sent over the air to every TV household. While we cannot be certain of the outcome of the digital battle for eyeballs, we can take pride in knowing that by modifying the standard we gave the marketplace an opportunity to pick the winner.

Spectrum Flexibility

With respect to rules governing use of the digital spectrum, the Commission takes the right approach in departing from the previous notion that, after digital broadcasters were on the air, Commission rules were needed to micro-manage their businesses.

High Definition

Previously, many contemplated requiring broadcasters to use a single format -- the high definition format -- even though most Americans cannot afford sets capable of displaying the difference between the high definition format and lower-resolution digital formats, and even though most Americans do not have living rooms large enough to allow viewers actually to see the difference. A high definition requirement would have prevented broadcasters from airing multiple channels at once, even if that's what some viewers might prefer at least some of the time, even if that could lead to the invention of new kinds of television, and even though that is what might lead to a service that can compete head-to-head with cable TV, satellite services or other multiple video channel providers. The Commission today rightly rejects a high definition requirement.

Simulcast

The Commission also rightly rejects the argument that broadcasters should be required immediately to broadcast simultaneously on their new digital channel the programming they air on their analog channel. This too would have needlessly hamstrung broadcasters, who would have been deterred by rule from offering viewers the full benefit of digital television technology. Wisely, the Commission adopts a reverse simulcast for the last few years of the transition (the rump share of analog TVs in the market must show programming available on digital television). This rule is narrowly tailored to the goal of recovery spectrum.

Preservation of Free-Over-The-Air Programming

The Commission today adopts just one requirement for use of the digital spectrum: broadcasters must provide one free TV programming service. This will ensure that adoption of digital television gives consumers at least what they reasonably expect from every current licensee: one free, universally-available, national programming channel. Meanwhile, it gives broadcasters the freedom to put together packages of digital programming and services that will be most attractive to consumers. This will speed consumer take-up of digital TV. It is an open invitation to innovation and entrepreneurship, an invitation America needs broadcasters to accept.

Business Relationships

Under the rules we adopt today, broadcasters are free to accept this invitation by partnering with others. The Commission rightly gives broadcasters flexibility in structuring

arrangements that will bring expertise and capital into the digital TV business. By working together or with others, broadcasters could share facilities costs and equipment, and the development and provision of programming and digital services. Broadcasters can partner with each other, as by sharing a digital studio. Or they can partner with others such as computer hardware and software companies, who are itching to help make digital television as desirable as possible for the American people.

IMPROVING THE PUBLIC INTEREST BENEFITS

Recovery of Spectrum

The digital channel allotment plan that the Commission adopts today similarly represents a dramatic improvement over what was previously contemplated. The prior plan would have recovered 72 MHz after a transition of 15 years. The new plan recovers 138 MHz -- 60 MHz immediately and 78 MHz in ten years.

Early recovery is made possible by an allotment plan that minimizes the number of digital channels above channel 59. The allotment table we issue today has only 15 allotments in channels 60-69, down from 30 allotments in the table we released when we issued our Notice of Proposed Rulemaking and substantially less than the 156 allotments in channels 60-69 that some in the broadcast industry sought.

The 60 MHz at channels 60-69 that we will recover quickly and the additional 78 MHz that will be recovered later is found gold that will generate enormous benefits for the public.

Some of that spectrum -- 24 MHz -- can be quickly reallocated to help address the serious spectrum needs of our public safety agencies. The benefits of this can be measured, literally, in lives saved. The remaining spectrum (36 MHz from channels 60-69 plus 78 MHz at the end of the transition) can be assigned by auction for any use the public desires. By way of comparison, the Commission's auction of 60 MHz of spectrum as part of the A and B block PCS licenses generated $7.7 billion in winning bids, twice that much in new investments, literally thousands of new jobs, and the many other benefits associated with new competition.

There are yet more potential benefits. Bob Johnson, Chairman and CEO of Black Entertainment Television, has said that if spectrum at channels 60-69 were auctioned he and others would bid to acquire licenses "to create a new minority-owned digital broadcast multimedia network." An auction with that desirable possibility should be encouraged.

It is worth noting that there are still other significant changes in the allotment plan we adopt today. We went from a policy of equalization, that would have by government fiat destroyed the market values earned by different broadcast licensees, to a policy of replication, that respected existing market valuations. We went from a policy of first come/first serve in

terms of spectrum assignment to a policy of having the Commission set the assignments. While this task presented enormous technical complexities, at the urging of broadcasters we undertook this challenge and the result will be much greater certainty as to the build-out. We went from an inefficient policy to the most spectrum-efficient policy for television. We went from a policy that created greater interference for existing analog television sets to a policy that reduced such interference.

We also went from doing essentially nothing for low power television and translators to adopting a number of creative measures to minimize the impact of digital television on those services. Now that the DTV allotment table is done, it is time for the Commission to explore ways to find a permanent home for the low power service.

The many benefits associated with the DTV allotment plan that the Commission adopts today are the direct result of the hard work, rigorous analysis and extraordinary commitment of several of the Commission's brilliant engineers and economists, including Bruce Franca, Alan Stillwell, Robert Eckert, and Robert Bromery, who for the last two years have been supervised and fully supported by Office of Engineering and Technology Chief Richard Smith. I am proud to have worked with these dedicated public servants.

The Build-out of DTV

The Commission previously would have given all broadcasters a full six years to begin digital TV transmissions. Six years would have stretched out the introduction of DTV far too long, making for a fitful, lackluster launch of this new medium instead of the impressive entry our rules provide. The cost could well have been the death of free TV, as broadcasters' pay competitors -- cable, DBS, wireless cable and others -- move earlier to digital and lock in subscribers.

Today the Commission adopts rules that guarantee there will be three or four network-affiliated digital signals in the top ten markets by April 1, 1999, roughly 24 months from now, and three or four network-affiliated signals in the top 30 markets by November 1, 1999, roughly 30 months from now. The focus on multiple TV signals in each market is critical, since -- as our experience with color TV proves -- consumers won't buy TV sets for a single improved signal. And the 30-month milestone is significant because it means that there will be multiple digital television signals in the top 30 markets -- representing 53% of the country -- by November 1, 1999, in time for the holiday shopping season that year. More than 40% of television sets are sold in the last quarter of each year.

In addition, a number of television stations in the top ten markets have committed to building their digital facilities in 18 months -- that is, by November 1, 1998 -- in time for the 1998 holiday shopping season. NBC in particular is to be praised for its commitments; it has pledged that 80% of its owned and operated stations in the top ten markets will be up and running with digital TV in 18 months. The other major networks deserve commendation in accordance with their commitments: ABC has pledged to build 60% of its O&Os in the top

ten markets in 18 months; CBS has pledged 57%; and Fox has pledged 33%. Other broadcast groups, such as Gannett, have similarly made important commitments. And the NAB and MSTV have said that they will continue to encourage broadcasters to begin digital television in time for the 1998 holiday shopping season. The broadcast community has come a long way since as recently as last month, when they questioned whether a significant build-out by the fourth quarter of 1998 was possible and advocated that the Commission adopt a 6-year build out rule. I very much appreciate the progress and the hard work it will take in many cases to meet these commitments.

I would have preferred to adopt an 18-month rule to guarantee that we have three or four network-affiliated stations in the top ten markets by the 1988 holiday shopping season. It is beyond dispute that an 18-month build-out is reasonable. A rule applying to all network-affiliated stations would have been more fair than an approach that, in effect, rewards stations that did not make 18-month commitments. And it would have given manufacturers the certainty they need to build digital TV sets in massive amounts for the 1998 holiday shopping season. The Consumer Electronics Manufacturers Association specifically urged us to require that multiple digital signals be available in the top ten markets in 18 months. I am concerned that failure to adopt an 18-month rule will delay a major launch of digital television by one year, to the 1999 holiday shopping season, and that such a delay needlessly places the success of digital TV -- especially free digital TV -- at risk. I hope to be proven wrong.

I am also concerned by the Commission's decision not to adopt a phased-in build-out rule for markets 30-211. The failure to do so means that over 90% of television stations have no requirement to build out before five years. This puts our spectrum recovery goals unnecessarily at risk. I believe there is a good chance that market forces generated by a rapid build-out in the top 30 markets will cause the remaining markets to build out relatively quickly. But I would have preferred not to leave this to chance, no matter how good. I hope the Commission will revisit this decision as early as next year.

Nonetheless, the build-out plan adopted today is an extraordinary improvement over the plan proposed earlier.

Public Interest Programming

Broadcasters who receive this boon of licenses for the public spectrum must also accept the responsibilities that accompany such licenses.

The Commission does not yet adopt specific new public interest rules for broadcasters in the digital world. Instead, we will allow the Administration, Congress and the public to advise us on the appropriate nature and scope of specific public interest obligations in the future. The Report and Order that we adopt today makes it crystal clear, however, that in deferring decision on public interest rules, the Commission forecloses nothing from its consideration or adoption. The Commission specifically places broadcasters on notice that it may adopt new public interest obligations. As the decision today states, the Commission will

issue a Notice on the public interest to gather all ideas and views. This will give the public a real chance to ensure that the Commission adopts appropriate public interest obligations for broadcasters in the digital age.

What might those obligations look like? First, as the Vice President stated in announcing a Presidential Advisory Committee on the public interest, the obligations should be clear. Especially in a dynamic and flexible digital environment, broadcasters need to know exactly what is expected of them; the public has a right to know the same thing; and so does the Commission if the obligations are to be enforced. Second, as the Vice President also said, the obligations should be commensurate with the opportunities provided by the new digital channel being given to existing broadcasters. The obligations should give the public a fair deal for free use of its spectrum, and they should take fair account of the effective increase in capacity that digital technology allows -- the fact that a digital broadcaster can air multiple channels require over the same amount of spectrum that allows an analog broadcaster to air just one.

One possibility is for the Commission to require that five percent of capacity be devoted to public interest purposes -- desirable programming or services that the market on its own won't adequately generate. There is ample precedent for this. DBS providers must set aside 4-7% of their capacity for educational programming. And cable operators must set aside specific percentages of their channels for must carry, leased access and PEG.

Another compatible possibility is to adopt a rule requiring broadcasters to set aside a specific and ample amount of time for candidates to speak directly to voters. This could be combined with legislative action setting limits on campaign spending -- the approach set out in the legislation introduced by Senators McCain and Feingold. Setting aside TV time for candidates would directly fulfill one of the basic tenets of national communications policy -- "promoting the widespread dissemination of information from a multiplicity of sources." Turner Broadcasting System, Inc. v. F.C.C., 117 S.Ct. 1174, 1186 (1997). As Justice Breyer pointed out in making the fifth vote for the Supreme Court's decision upholding must carry, "That policy . . . seeks to facilitate the public discussion and informed deliberation, which, as Justice Brandeis pointed out many years ago, democratic government presupposes and the First Amendment seeks to achieve." Id. at 1204 (Breyer, J., concurring). At the same time, stump time for candidates would remedy a problem that has steadily worsened over the last two decades: the fundraising that office holders must pursue in order to afford the TV time necessary to reach voters. A better system would let candidates at election time use the public spectrum for free, and surely it is not unreasonable for broadcasters to offer this service in return for all they have been given.

Justice Breyer's important opinion observed that must carry "extracts a serious First Amendment price," a price that "amounts to a suppression of speech." Id. at *26 (Breyer, J., concurring) Justice Breyer concludes that it is a price worth paying, however, because of the First Amendment interests that must carry promotes: ensuring the "quality and quantity of programming choice" for non-cable subscribers, thereby facilitating public discussion and

informed deliberation. Id. (Breyer, J., concurring)

Just as it furthers First Amendment principles to require cable operators to carry broadcast channels, it would further First Amendment principles to require broadcasters to carry the messages of political candidates without payments.

The same is true of rules requiring broadcasters to provide programming that educates children. The purpose of these rules is to help ensure that children in our society grow into citizens who can not only fully participate in our economy, but who can fully participate in the public discussion and informed deliberation that democratic government presupposes.

Digital technology provides many new and creative opportunities for broadcasters to serve the country and the public interest. Access for candidates and children's educational TV are only two possibilities. The Presidential Advisory Committee will grapple with this and, I expect, generate exciting new ideas. And the Commission will return to explore in greater depth the question of how broadcasters should satisfy their public interest obligations in the digital age.

The decisions in the second of the two Reports and Orders we adopt today -- the service rules item -- and the substantial improvement over what previously had been contemplated, are the result of the hard work of many dedicated public servants. And for that the public should thank Saul Shapiro, Mania Baghdadi, Gretchen Rubin and Dan Bring, as well as their supervisors Roy Stewart, Renee Licht and Doug Webbink and many others in the Mass Media Bureau. For long days over many months they have devoted all their energy and their impressive talents toward one overarching goal: implementing Congress's decision on the award of digital licenses in a way that will serve the public interest in every respect. They have succeeded.

The Future

Broadcast television is our only free, universally available communications medium. It uses the public property of the airwaves and so is appropriately required to provide all Americans with programming that serves the public interest. And as the Supreme Court pointed out just this week, "though it is but one of many means for communication, by tradition and use for decades now it has been an essential part of the national discourse on subjects across the whole broad spectrum of speech, thought, and expression." Id. at 1188.

Those are the reasons that Congress enacted and the Supreme Court upheld the must-carry law.

Congress has decided that we should help broadcasters retain this position in the digital age by giving each existing broadcaster a second 6 MHz band of spectrum. Whether this was the best way to launch digital television has been legitimately questioned by many. Nevertheless, the role of the FCC is clear: our threefold task is to implement Congress's

decision in a way best designed to promote the success of free, over-the-air digital television in a competitive marketplace, to recover spectrum as quickly as possible, and to ensure that broadcasters serve the public interest.

The decisions we have made in no way guarantee the success of digital television. Our job at the Commission is to give DTV a fighting chance. DTV broadcasters face many challenges. Other media such as DBS, cable, wireless cable, and telcos have or soon will offer all the advantages of digital technology. Unless DTV is available soon, and unless it is available in a way that will attract consumers, it may never be able to catch up to the head-start of its competitors. That is why rapid construction requirements are so important. Unless DTV hits the air running, it will be left in the dust of its competitors. At stake is the viability of our free, over-the-air television system.

Already DTV faces a challenging landscape in which 65% of households receive broadcast television through cable wires. Will broadcasters seek to wean these households from cable so that they can receive the digital signal off the air? If so, how? Will they offer multichannel packages that will compete directly with cable? Or perhaps broadcasters assume that most Americans will continue to receive broadcast programming through cable wires (or through DBS, if it begins retransmitting local signals). But then why purchase a digital TV set designed for over-the-air delivery? And what about the relationship between networks and affiliates in the digital world? What role will the networks' increasing investment in cable play? Will broadcasters offer programming that attracts viewers to Digital Television? These are only some of the difficult questions broadcasters will have to answer, and quickly.

Last October I gave a speech to broadcasters which I concluded by saying, "we are getting very close to working out all the issues and reaching resolution to all the complex DTV questions. But in the end, the success of digital TV will not be determined by the FCC; it will be determined by alliances that may not now exist -- alliances between, among others, broadcasters, TV manufacturers, the hardware and software arms of the computer industry, the creative community, and newspapers and by content creators that don't now use spectrum for transmission. It will be driven by market forces not regulatory demands. I'm certain that in just a few months, the policy debates will be behind us, and the digital future will be here."

Thanks to the Commission's actions today, the future is now. And the future of digital television, while not guaranteed, is much brighter for the changes we have made.

SEPARATE STATEMENT OF COMMISSIONER JAMES H. QUELLO

Re: Adoption of a New Table of Allotments.
Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service (MM Docket No. 87-268, Sixth Report and Order)

This is an historic moment for all of us. With this decision, we move forward with the implementation of digital television, and the goal of preserving free, over-the-air television has been realized for generations of viewers into the 21st century. Broadcasters will be able to broadcast their signals digitally, and provide the American public with either a crystal clear programming stream comprised of 6 MHz of spectrum, or an extraordinary signal using less than 6 MHz, thereby preserving the ability to offer supplemental or ancillary services of a kind that we have yet to imagine.

I want to emphasize that the DTV product is not the brainchild of government, but the result of the hard work of the broadcasting, manufacturing and computer industries. These industries have developed the best, most innovative plan for digital broadcasting in the world. Engineers and executives alike have devoted years of their lives to bring us to this point, and for them, the work has only begun.

But this great advance has not been without its obstacles. One such obstacle has been the concern over the UHF power level, and the UHF/VHF power differential. The Commission's decision however, finds compromise on this issue the best resort, thereby establishing a minimum power level of 50 kilowatts and a maximum power level of 1 megawatt. We believe that the power levels assigned in the table will provide replication of service areas in almost all instances. The Commission reserves the right to further address this issue after two years, during such time we anticipate that the technical aspects of these issues can be more fully explored. We also permit, under certain circumstances, increases in power beyond those contained in the table.

The Commission's decision also goes far towards maximizing the use of spectrum. In channels 60-69, we believe that we can recover 24 MHz almost immediately to reallocate for use in the public safety arena. With respect to additional spectrum available in channels 60-69, the Commission will consider in a further proceeding what to do with this spectrum. We also state our goal of recapturing 138 MHz of spectrum at the end of the

transition period. I believe it is important to note that our decision here in no way prejudges what any recovered spectrum will be allocated for, and does not foreclose the possibility of its use for full power or low power broadcast services.

In this regard, the Commission's decision also attempts to balance the need for a smooth transition to digital television with the continued operation of low power television. I support all the services that low power television provides in this country. Translators provide access to over-the-air television for many who are located in remote areas. Also, low power television operators often provide the kinds of niche programming in both urban and rural areas that address very specific needs in their communities. In this decision, the Commission implements a number of specific measures to mitigate the impact of DTV implementation and keep low power operators in the broadcast business. In addition, we will regularly review this issue to see what more can be done.

As a broadcaster in my previous career and a 23 year veteran of this Commission, I am proud of what the television industry and the other industries involved have accomplished thus far, and I am excited about the future. The possibilities are endless, and the all important goal of preserving and enhancing free, over-the-air television has been realized.

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Separate Statement
of
Commissioner Susan Ness

Re: Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, MM Docket No. 87-268.

Our decisions today ensure a bright future for free, over-the-air broadcasting, and thereby secure its continuing vitality as the principal source of news, information, and entertainment in homes throughout our nation.

The two orders adopted today, along with the standards decision issued last December, conclude a lengthy deliberative process. The momentous result of an extraordinary industry-government partnership, our new rules will facilitate an expeditious and successful launch of digital broadcasting, delivering abundant benefits to the American consumer. The landscape of television will be forever changed.

Throughout our deliberations, my primary concern has been to protect the interests of the American consumer. Our decisions today accomplish that goal.

Highlights of our actions include an aggressive but achievable deployment schedule that will accelerate the availability of digital broadcast signals in major markets, stimulate demand for new television and computer products, and permit the recovery and auctioning of spectrum currently allocated to the broadcast service. Service rules will enable broadcasters to experiment with high-definition television, multi-channel standard definition programming, and ancillary services such as paging and data delivery. Broadcasters need not delay while their public interest compact is renewed and clarified, but there is clear notice that we will maintain the fundamental precept that broadcasters have a special obligation to operate in the public interest.

I am particularly pleased that fully half of all Americans should be able to receive three or more digital broadcast signals within 30 months. I also welcome the opportunity to provide new spectrum for public safety uses -- and later to reclaim other channels that will permit the delivery of new services to the public, and auction revenues to the Treasury.

Service rules

Deployment schedule: Our decision on the service rules gives broadcasters a green light to move rapidly to convert from analog to digital. Each broadcaster shortly will receive authorization for the transition channel identified for its use.

The transition from analog to digital broadcasting presents difficult practical challenges. One difficulty is the "chicken-and-egg" relationship between transmission and reception. Broadcasters are not eager to invest significant sums to broadcast a signal that no one can receive. Manufacturers are reluctant to build -- and consumers will be reluctant to buy -- receivers for which there is no programming. The only solution is for both industries to move forward in tandem, sharing the commitment and the risk.

I believe we have addressed this issue in a way that maximizes the opportunities for a rapid and successful launch of digital broadcasting. A substantial number of the largest broadcasters in the top ten markets voluntarily have committed to commencing digital broadcasting within 18 months. This will be in time for the 1998 Christmas holiday shopping season, when digital receivers should be widely available to consumers.

A rapid and progressive transition to digital will be further promoted by the mandatory conversion schedule we are adopting. The top four network-owned and operated stations and network affiliates in the largest 10 markets must convert within two years; in the top 30 markets, the conversion must occur within 30 months. All commercial stations will be required to be on air in five years, and public stations in six.

Of course, our schedule recognizes the possibility of extenuating circumstances that are outside the broadcasters' control, such as inability to secure tower locations for new antennas. But the commitment to move rapidly must -- and will -- be there.

In short, the deployment schedule is rapid, rigorous, and yet reasonable. It is practical and achievable. It enjoys the strong support of the broadcasters and receiver manufacturers upon whom we depend to roll out service to the public.

Further, this schedule is consistent with our target of 2006 as the date on which the analog signals will cease. This is essential so the "loan" of the channels can be ended and the analog channels recaptured and readied for auction. Then, the American public will receive the benefits of both the auction revenues and of the new services that the auction winners will offer.

Service flexibility: Consistent with the Telecommunications Act of 1996, we have provided broadcasters with the flexibility to experiment with the types of services to be offered under the digital transmission standard adopted last December. Based on my conversations with broadcasters and others, I fully expect to see a wide variety of new services, including data and Internet access, computer software transmission, electronic newspapers and magazines, and a host of other services. Our computer-friendly approach leaves it to the marketplace to determine the kinds of devices American consumers will choose to receive the digital signals that will be broadcast.

Yet, even as we allow for new ancillary services, we must not forget the reason for which broadcasters were accorded the spectrum to effectuate a full conversion to digital: to

preserve and enhance free-over-the-air broadcast service. Broadcasting plays a unique role in American society, and the American public rightfully expects that broadcasters will use these channels to continue to deliver news, information, sports, and educational programming for children, among other things. Our rules will ensure that this service continues.

Simulcasting: During the transition period, broadcasters will have temporary use of an additional six megahertz channel to deliver digital programming and other new services to the public. I emphasize the word "temporary." We will reclaim the temporary channel when consumers have converted to digital receivers.

My desire is to expedite market penetration of the new digital sets, yet ensure that we obtain return of the temporary channels. Consequently, we have agreed not to impose a simulcasting requirement during the early years of the transition, when new programming and features need to be maximized to encourage sales. Once substantial market penetration is achieved, continuing separate programming on the analog and digital channels likely would impede the orderly return of the spectrum. Hence, we adopted simulcast requirements in the later years of the transition to ensure that consumers will not be inconvenienced in the period before the analog signal is turned off.

HDTV: High-definition television -- with crisp pictures, true color, multi-channel compact-disc-quality sound, and a wide aspect ratio -- has the potential to provide a theatrical viewing experience. We permit, but do not require, the use of digital channels to offer HDTV.

The FCC standard is on its way to global acceptance as state of the art. Consumers increasingly desire "home theater" facilities. While the price of wall-sized flat screens is prohibitively high today for most consumers, as technology advances the cost of such equipment is bound to decline. High definition pictures, especially for movies and sporting events, may be a major consumer draw.

While we do not require broadcasting in high definition, we carefully avoid any policies that would inhibit its emergence. The consumer marketplace -- not the government -- should determine the success or failure of HDTV.

Public Interest: In a future Notice, we will proceed to explore and better define the public interest obligations of broadcasters in the digital world. As we formulate that policy, I personally look forward to insights from the advisory committee that is being established by President Clinton and Vice President Gore, as well as from Congress and the public.

Allotment Schedule

The allotment schedule we adopt today is a masterpiece of engineering. Many said it couldn't be done, but this plan accommodates all existing broadcast stations during the transition in a manner that avoids loss of free, over-the-air broadcast service to consumers.

Signal Disparity: The Table provides existing high-powered stations with digital coverage areas that essentially replicate their analog service area contours. We also set a floor power level for existing UHF stations, and a ceiling of one megawatt for existing VHF stations moving to UHF, to mitigate the power differential between these types of stations within their primary service areas. This is necessary to ensure that the signals from all size stations will sufficiently penetrate buildings within their primary markets.

Channels 60-69: We have limited the number of analog and digital stations that will broadcast on channels 60-69. Subject to the existing broadcast operations, this will facilitate expeditious reallocation of this spectrum for other purposes.

In particular, I favor a plan to allocate four of the channels -- 24 MHz -- for public safety. The need for additional spectrum, and the suitability of this specific spectrum for public safety uses, was demonstrated in the report of the FCC and NTIA's Public Safety Wireless Advisory Committee. We will address this shortly in a new proceeding.

I am concerned that public safety entities such as firefighters, police, and rescue workers not be hampered by having insufficient spectrum. Public safety entities often cannot communicate with each other in an emergency, such as a bombing or plane crash. It is inexcusable that today these life-saving agencies cannot talk to each other without multiple radios operating across scattered spectrum bands. In the middle of a disaster rescue operation, our public safety teams should not have to worry about having the right radio equipment in hand. We have set in motion a process that will free up enough contiguous, versatile spectrum to facilitate those vital communications.

I look forward to expeditiously allocating the remaining space between channels 60 and 69 to new uses. I consider these 60 megahertz a "downpayment" on our commitment to the American public for the return, repacking, and auctioning of the remaining spectrum that will be reclaimed. After conversion from analog to digital is completed, the total spectrum reserved for broadcasting will shrink by over one-third, and that which is recovered will be put to other valuable uses.

Low Power Television: We have done everything possible at this time to enable the maximum number of low power stations to continue operating and providing desired services to consumers.

We also are looking for any additional methods which we could employ to enable even more low power stations to continue broadcasting, both during the transition and afterward. I expect that the adoption and release of our specific allotment table will enable engineers to go to work -- as I know the Community Broadcasters Association has suggested -- and find channels where existing low power stations can be accommodated.

Low power offers a valuable service -- providing communities with news and information tailored to their needs. I want to enable as many LPTV stations as possible to prosper in the

digital age. Perhaps one method -- where everything else fails -- would be to assemble stations on a multiplexed digital six-megahertz channel. Another "last-ditch" method might be for contractual arrangements with full-powered stations to carry the LPTV signal on one programming stream.

Such results clearly would promote the public interest in making more and diverse programming available to consumers.

The items adopted today are not the final word on LPTV. We remain committed to doing our best to preserve these additional voices in the broadcast marketplace.

Conclusion

I am proud of the way in which my colleagues, our staff, and interested parties have worked together on these orders. I truly believe that the net result will serve the interests of American consumers.

The conclusion of these phases of the governmental process sets the stage for an intense period of rapid progress in the marketplace. Other issues will require our attention, but with these decisions broadcasters and receiver manufacturers now have a clear path to the digital future. I urge them to proceed with the same vigor and commitment they have so ably demonstrated in recent weeks.

Separate Statement of

Commissioner Rachelle B. Chong

Re: *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, Sixth Report and Order (MM Docket No. 87-268)*

I am pleased to support this Report and Order in which we adopt a Table of Allotments for digital television (DTV), rules for initial DTV allotments, procedures for assigning DTV frequencies and plans for spectrum recovery. This was a difficult task, but I believe we have generally succeeded in ensuring that all eligible existing broadcasters are accommodated, and that existing service areas are generally replicated.

This decision strikes a difficult balance between fiercely competing interests on the issue of UHF power levels and the power differential between UHF and VHF stations. We have adopted a plan, based on an industry-proposed compromise, calling for a 50 kilowatt minimum power level and a 1 megawatt maximum power level. This plan provides for a high degree of service replication. At the same time, it ensures that all stations may provide DTV service competitively in their markets. I believe this is a fair, workable solution. To the extent that there is a need to make adjustments in individual cases to accommodate interference problems, I am confident that the talented engineers both inside and outside this agency will be able to find answers and that we will be able to resolve the issues on a case-by-case basis.

One of the most important aspects of this decision is that it establishes an allotment table that provides all eligible broadcasters with a DTV channel, primarily in a "core" region of the broadcast spectrum. By using this core concept, we will facilitate the quick recovery of approximately 60 MHz of spectrum at channels 60-69, and the eventual recovery of additional spectrum. I emphasize, however, that we have not made any decisions in this order to reallocate any of this spectrum. Moreover, we do not preclude the possibility that a future Commission might decide that some of the recovered spectrum could be used for either full power or low power broadcasting. Those are decisions for another day.

With regard to the 60 MHz of spectrum targeted for "early recovery," I believe that we should explore the possibility of using part of the spectrum for public safety needs. Many parties to this proceeding made compelling arguments that spectrum in the channels 60-69 range would go a long way towards solving some of the pressing spectrum need of public safety users. This is a worthy goal and one that I believe we ought to pursue.

Finally, with regard to low power television service, this decision recognizes the

significant contributions that these services make to the public. While there is not enough spectrum during the transition period to accommodate every low power service, we have taken steps to mitigate the impact of DTV implementation of LPTV. For example, we are changing some of the technical rules requested by the LPTV and TV translator industries, which will provide additional flexibility to accommodate low power operations during and after the transition to DTV. Moreover, we will allow LPTV and TV translators to operate on all existing TV channels, including channels 60-69, so long as such operations do not cause harmful interference to any primary operations. We hope this will preserve many existing low power operations and open many new channels for those LPTV operations displaced by DTV.